

ABSTRACT OF THE INVENTION

A one-piece or otherwise unitary annular shim member made from a carbon material or a metallic is used to maintain a space between stacked annular preforms during a manufacturing process, such as densification. The one-piece structure advantageously simplifies the arrangement of the preforms in a process chamber and causes less deformation in the preforms. The carbon composition also provides beneficial thermal effects that improve the densification process. A debonding coating is provided on the carbon annular shim member in order to facilitate separation of the annular preforms from the shim members. The metallic annular shim member does not require a debonding coating.